

Appln No. 09/703,264

Amdt date February 5, 2004

Reply to Office action of November 5, 2003

REMARKS/ARGUMENTS

Claims 1-39 are pending in this application. Claims 1 [and 2, 3, 6, 8-12, 14-15, 17-20, 22-23, 25, 27-31, 33, and 36-37] are rejected under 35 U.S.C. § 102(b) as being anticipated by Eppler (5,600,714); claim 4, 21, 32, and 39 are rejected under 35 U.S.C. § 102(b) as being unpatentable over Eppler in view of Sih (5,732,134); claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Eppler in view of Sellenslagh (3,433,898); claims 7, 34 and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Eppler in view of Hasegawa (5,905,717); claims 13 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Eppler in view of Isenburg (5,570,295); claims 16 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Eppler and Isenburg in view of Hasegawa; and claim 35 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Eppler in view of Sih (5,732,134).

Applicants submit that all of the pending claims in this application are patentable over the cited references, and reexamination and reconsideration of the rejections and allowance of this application are respectfully requested.

Independent claims 1, 11, and 22 include among other limitations, "adapted to cancel an echo in a near end signal, the echo comprising at least a portion of a far end telephony signal and at least a portion of a secondary audio signal," and independent claims 33 and 37 include among other limitations, "combining a primary telephony signal and a secondary audio

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signal to form a reference signal," and "adaptively filtering the reference signal."

Eppler does not disclose the above limitations. Applicants respectfully disagree with the statement in the Office action that "Eppler discloses an echo canceller comprising an adaptive filter and coefficients adapted to cancel an echo in a near end signal (input waveform at terminal 38 in Fig. 1) from a far end signal (output waveform at terminal 36 in Fig. 1) (Col 6 lines 18-36)" See, Office action, page 2, third paragraph.

The system of Eppler requires two echo cancellors. A room acoustic echo cancellor (24 in Fig. 1) "compares the output of amplifier 76 to the signal picked up by microphone 12, producing a different signal which is sent to room acoustic echo canceler 24. This allows echo canceler 24 to continually adjust parameters, that is to say, to continually adjust the amplitude of the echoes until a set of amplitudes for each of the echoes is reached which allows the white noise signal output by speaker 58 and received by microphone 12 to be completely canceled by a cancellation signal which appears at the outputs of room acoustic echo canceler 24 and is sent to digital adder 20." (Col. 8, lines 8-18). Therefore the echo canceler 24 cancels the white noise signal output by speaker 58 and received by microphone 12, that is the near end signal.

In addition to the echo canceler 24, the system of Eppler requires a second echo canceller. That is the Line Hybrid echo canceller (46 in Fig. 1) for cancelling the echo in the line, that is far end signal. The "room acoustic echo canceler 24 and the line hybrid echo canceler 46 are trained during installation

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for an initial set of scaling parameters corresponding to the user's room and the telephone line, and these scaling parameters are the starting point for the system each time the system is turned on." (Col. 7, lines 47-53). As a result, none of the echo cancellers of Eppler is "adapted to cancel an echo in a near end signal, the echo comprising at least a portion of a far end telephony signal and at least a portion of a secondary audio signal," as required by the independent claims 1, 11, and 22. Similarly, none of the echo cancellers of Eppler adaptively filters a reference signal, which is formed by combining a primary telephony signal and a secondary audio signal, as required by the independent claims 33 and 37. Accordingly, the independent claims 1, 11, 22, 33, and 37 are not anticipated by Eppler.

In short, the independent claims 1, 11, 22, 33, and 37 define a novel and unobvious invention over the cited references. Thus, these claims are allowable over the cited references. Dependent claims 2-10, 12-21, 23-32, 34-36, and 38-40 are dependent from these independent claims, respectively and include all the limitations of their respective independent claims and additional limitations therein. Accordingly, these claims are also allowable over the cited references, as being dependent from allowable independent claims and for the additional limitations they include therein.

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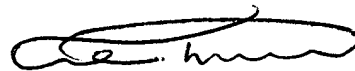
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In view of the foregoing amendments and remarks, it is respectfully submitted that this application is now in condition for allowance, and accordingly, reexamination and allowance are respectfully requested.

Respectfully submitted,  
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